

## REMARKS

### I. INTRODUCTION

#### A. Summary of the Present Invention

Aspects of the present invention are directed to a system, method, and computer-readable media that allows a user to interact with one or more remote devices in a security monitoring system. In this regard, aspects of the present invention dynamically generate a user interface that allows a user to control a remote device included in the security monitoring system. Control of the remote devices can include accessing data and issuing instructions to execute functionality on the remote device. Thereafter, user initiated control instructions may be obtained from the graphical user interface. The remote device control data corresponding to the user control instructions is processed at a central location and transmitted to the appropriate remote device where the instructions are executed.

#### B. U.S. Patent No. 5,982,362 to Crater et al.

Crater is directed to a video interface for monitoring equipment states for the purpose of detecting malfunctions in industrial controls. In this regard, Crater describes a video interface architecture that enables one or more the remote computers to download video data and associated instructions from one or more controllers. Each of the controllers is equipped to perform a control function to gather data relevant to these control functions. From the user interface described in Crater, one or more remote operators may visually check a portion of the controlled equipment to verify that a machine is operating properly. For example, a video camera may transmit images of gauges for verification that a control parameter is being satisfied. However, Crater fails to teach or suggest generating a graphical user interface responsive to a request for controlling a remote device.

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## II. THE CLAIMS DISTINGUISHED

### A. Claim Rejections Under 35 U.S.C. § 102

The Office Action rejected Claims 1-16, 19, 23-27, and 37-40 under 35 U.S.C. § 102(e) as being anticipated by Crater et al (hereinafter "Crater"). The Office Action asserts that Crater discloses each of the elements of each of these claims. Applicants respectfully disagree. As described in more detail below, the cited reference fails to disclose or suggest certain elements of both the independent and dependent claims.

#### 1. Claims 1, 25, and 37

For purposes of this discussion, independent Claims 1, 25, and 37 of the present application will be discussed together because the same distinguishing elements over Crater are recited in each of these claims. Claim 1 recites the following:

1. A method for interacting with a remote device comprising:
  - obtaining a request corresponding to controlling at least one identifiable remote device;
  - generating a graphical user interface responsive to said request, the graphical user interface being operable to control the remote device, wherein controlling said device includes accessing said remote device and issuing instructions;
  - obtaining user control instructions from said graphical user interface for controlling the remote device, wherein the remote device is controlled by one authorized user at a time;
  - transmitting remote device control data corresponding to said user control instructions; and
  - obtaining remote device data generated by said remote device.

Similarly, Claim 25 recites the following:

25. A computer-readable medium having computer-executable components for dynamically interacting between at least one remote device and a computing device, comprising:

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a user interface application operable to dynamically generate a graphical user interface corresponding to the remote device in response to a request for interaction with the remote device, wherein the graphical user interface is operable to obtain user instructions to control the remote device, and wherein the remote device may be controlled by one user at a time;

a device interface application operable to obtain device data from the remote device, and operable to manipulate said data; and

a data transmittal application operable to transmit said data to the computing device, and to facilitate communication between the remote device and the computing device for controlling the functionality of the remote device from the computing device.

Claim 37 recites the following:

37. A system for dynamically generating a user interface for controlling at least one remote device comprising:

at least one remote device operable to receive control commands and to transmit monitoring data based on said control commands;

a server computer in communication with said remote device, said server computer operable to dynamically generate a graphical user interface for controlling said remote device, wherein the remote device may be controlled by one user at a time;

a client computer in communication with said server computer, said client computer operable to display said graphical user interface, and request said control commands for controlling said remote device.

As mentioned briefly above, the present application allows a user to interact with a remote device in a security monitoring system. In this regard, aspects of the present invention dynamically generate a user interface that allows a user to control a remote device included in the security monitoring system. More specifically, Claims 1, 25, and 37 each recite a graphical user interface operable to obtain user instructions to control the remote device, and wherein the remote device may be controlled by one authorized user at a time. In the context of security monitoring, dynamically generating a graphical user interface that allows one authorized user to

control the actions of a remote device is advantageous, as allowing multiple users to control the same device would not result in undesirable functionality.

As mentioned briefly above, Crater is directed to a video interface for monitoring of equipment states for the purpose of detecting malfunctions in industrial controls. In this regard, Crater describes a video interface architecture that enables a remote computer to download video data and associated instructions from one or more controllers. The remote computer includes a facility for processing the instructions to create a user interface which may include video and/or graphics or other presentations having a predetermined format. Using the system disclosed in Crater, remotely located personnel can monitor the efficiency or overall behavior of the equipment, visually check machine components, workpieces, or other critical components of the controlled system. Crater at Col. 3, lines 57-63.

In contrast to the elements recited in Claims 1, 25, and 37, Crater does not teach generating a graphical user interface for controlling a remote device. In describing the problem solved by Crater, the reference states:

... the type of information obtainable, on demand, from a controller has been limited, while the interface used to present the information on the monitoring computer is typically crude. The latter condition results from the multiplicity of data types offered by the controller.

Crater at Col. 2, lines 25-29.

In order to solve this problem, the Crater system provides a graphical user interface that collects and displays a multiplicity of data types that may be provided by a controller. These multiplicity of data types may include text, graphics, video, and the like. While the Crater system generates a graphical user interface for displaying different data types, Crater does not disclose generating a graphical user interface that allows a user to control a remote device. Instead, the Crater system is directed at gathering data including visual information relevant to

the control functions of various machines. The different data types monitored by the Crater system may be presented on a Web page. For example, as stated in Crater, applets may be used that:

. . . cause a properly equipped remote monitoring computer 50 (FIG. 2) to display the data in a dynamic fashion, or hyperlinks to other web pages, objects or applets. For example, an applet might cause temperature data to be displayed as a graphical representation of a thermometer, with the height of the rendered mercury column dynamically varying in proportion to the data from I/O modules 20 (and constantly provided to the remote computer via network interface 30); pressure data might be represented in the form of a graphically rendered needle-type pressure gauge.

Crater at Col. 8, lines 23-34.

From the user interface described in Crater, a remote operator may visually check a portion of the controlled equipment to verify that a machine is operating in accordance with the data being received. As further described in Crater:

For example, a command for controller actuation of a piston may be given and a video camera can be used to verify that the piston has been actuated. Additionally, a video camera can transmit images of gauges for verification that a control parameter conforms to data received from the controlled system, or that a circuit breaker has opened and a portion or all of the system has been shut down.

Crater at Col. 9, lines 30-37.

While monitoring machines may have benefits in the context of industrial controls, the system disclosed in Crater does not provide a graphical user interface for controlling a remote device. In this regard, by merely providing a user with remote access to monitored data, the Crater system does not provide a way for a user to control a remote device. In contrast to the system disclosed in Crater, Claims 1, 25, and 37 of the present invention recite generating a graphical user interface operable to control the remote device. In this regard, the graphical user interface may present controls that allow a user to actively interact with a remote device. For

example, as stated in the present application "a client computing device is able to control a remote device in accordance with aspects of the present invention." The present application at p. 17. In this regard, the user interface obtains a device manipulation request to modify the state of a monitoring device such as a camera. Then, processing is performed to interpret the device manipulation request to modify the state of the monitoring device. As a result, the user can affect a directional movement in a video camera and/or alter an environmental control setting such as the temperature on a thermostat. In contrast, the Crater system is merely directed at providing information about a remote device. Using the Crater system, a user would not be able to alter an environmental control setting such as the temperature on a thermostat. Moreover, this difference is reflected in each of the pending independent claims. More specifically, as recited in Claims 1, 25, and 37, aspects of the present invention are directed at generating a graphical user interface that allows the user to control a remote device. These elements of independent Claims 1, 25, and 37 are absent from the teachings of Crater.

Crater does not teach a graphical user interface that is operable to control a remote device wherein the remote device is controlled by one authorized user at a time. Instead, Crater purportedly teaches a system in which users, with the appropriate password, may access control data simultaneously. More specifically, as stated in Crater:

Naturally, the network accessibility of control data, particularly over the Internet, raises security issues. It may be desirable to equip controller-based web pages with a password access feature, whereby browser 57 or an executing applet must present a password before being accorded access to associated data.

Crater, Col. 10, lines 49-54.

In this regard, any user with the appropriate password may access a Web page that presents the control data simultaneously with other users.

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In contrast to the system disclosed in Crater, Claims 1, 25, and 37 only allow one authorized user to access a remote device at a time. As stated in the present application: "The authorized user is control of the specific monitoring device and passes a successful connection message to the control applet on the client computing device 90." Present application at p. 17. As a result, "the client computing device has exclusive control over the specific monitoring devices 34." Present application at p. 17. Only allowing one authorized user to control a remote device is not necessary in the Crater system since industrial controls are being monitored. Instead, the Crater system allows multiple users to obtain monitoring device data so that the appropriate personnel may be notified that an industrial control, such as a machine, has malfunctioned. On the other hand, the present invention is directed to providing security monitoring services. In this type of system, having multiple users be able to control the same monitoring device is not desirable. Thus, Crater in no way teaches generating a graphical user interface that is operable to control a remote device wherein the remote device is controlled by one authorized user at a time. Accordingly, for this additional reason, Crater does not teach each element recited in Claims 1, 25, and 37.

Under Section 102(e), a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987) (February 2003). Applicants respectfully submit that Crater fails to expressly or inherently teach, disclose, or suggest each and every element of Claims 1, 25, and 37. As explained above, Crater fails to disclose or suggest generating a graphical user interface responsive to a request for controlling a remote device. Accordingly, applicants respectfully request withdrawal of the pending rejection under 35 U.S.C. § 102 with regard to Claims 1, 25, and 37.

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2. Claims 2-16, 19, 23-24, 26-27, and 38-40

Claims 2-16, 19, 26-27, and 38-40 depend on the independent Claims 1, 25, and 37, respectively. Moreover, Claims 23-24, are computer readable media and computer system claims with elements that parallel independent Claims 1, 25, and 37. As discussed above, Crater fails to teach or suggest generating a graphical user interface that is operable to control a remote device, wherein the remote device is controlled by one authorized user at a time. Accordingly, for the above-mentioned reasons, Claims 2-16, 19, 23-24, 26-27, and 38-40 are also allowable over Crater. Additionally, these claims are not anticipated by Crater for additional reasons, some of which are discussed in further detail below.

Claim 2 includes the element of "wherein generating a graphical user interface includes dynamically generating a graphical user interface." As described above, Crater is directed at a video interface architecture for industrial control systems in which data is collected from various controllers. Those skilled in the art and others will recognize that controllers are devices with embedded software components (sometimes referred to as "firmware") that are incapable of being modified. In this regard, Crater states "every controller in the system is constantly active and in communication with network 55, facilitating access by computer to any controller-based web pages at any time." Crater at Col. 10, lines 34-38. By contrast, aspects of the present invention do not present data to a user based on the controller in which the data was collected. Instead, a graphical user interface is dynamically generated based on input received from a user. Since the Crater system does not dynamically generate a graphical user interface based on input received from the user, Crater in no way teaches the additional elements recited in Claim 2.

Claim 3 adds the additional element of "identifying a remote device corresponding to said request." Data displayed to a user in the Crater system is presented in discrete Web items that "are contained in the web pages of one or more controllers." Crater at Col. 10, lines 25-26.

Since the Web items that are displayed to the user are based on information received from a controller, the Crater system does not identify individual devices that correspond to a request. Instead, users are required to navigate to web pages with static addresses that present data obtained from a particular controller. In contrast, aspects of the present invention obtain input from a user that identifies one more monitoring devices in which data will be obtained. Accordingly, Crater fails to teach or suggest the additional element recited in Claim 3. Thus, applicants assert that this claim is also allowable for this additional reason.

Claim 15 has the additional element of "wherein transmitting data includes manipulating operating parameters of said remote device using said graphical user interface and wherein obtaining remote device data includes obtaining remote device data generated by said remote device based on said manipulated operating parameters." In accordance with one aspect of the present invention, data is obtained at a remote device that includes the operating parameters of the remote device. For example, if the remote device is a video camera, the operating parameters may include information regarding whether the video camera is able to perform functions such as, but not limited to, zooming, panning, tilting, and the like. Generally stated, these operating parameters describe the abilities of the remote device. As recited in Claim 15, these operating parameters are obtained and manipulated so that an appropriate graphical user interface may be generated. For example, in order to provide functionality that allows a user to control the remote device, these operating parameters are processed so that the appropriate controls may be presented on the graphical user interface. The Office Action asserts that Crater teaches manipulating operating parameters of said remote device using said graphical user interface and wherein obtaining remote device data includes obtaining remote device data generated by said remote device based on said manipulated operating parameters. Office Action at page 5. In support of that proposition, the Office Action cites Col. 9, lines 4-12, of Crater, which states that:

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... the monitoring engineer may select which video camera image from the images captured by the video camera bank is to be displayed, as well as the length of time such display is desired. The monitoring engineer scanning the video/graphic display may decide, for example, to make an adjustment to the equipment and to check visually to ascertain whether the expected response or event has occurred at the remote machine or in the remote process in response to the adjustment.

Crater at Col. 9, lines 4-12.

While the cited portion of Crater describes a system in which an engineer may select a particular video camera, it does not teach the additional element of manipulating operating parameters of a remote device. For example, the cited portion of Crater does not teach obtaining operating parameters that would allow a user to "zoom-in" on an industrial control. Accordingly, Crater fails to teach or suggest the additional elements recited in Claim 15.

B. Claim Rejections Under 35 U.S.C. § 103(a)

The Office Action rejected Claims 17-18, 20-22, and 28-36 under 35 U.S.C. § 103(a) as being obvious over Crater in view of various combinations of Hesselink, Amini, Brush, Lemons, Launey, and Nail. The Office Action asserts that various combinations of cited references disclose each of the elements of applicants' claims and that it would have been obvious to a person of ordinary skill in the art to combine the teachings of the cited references at the time the invention was made. As described in more detail below, the cited references fail to disclose or suggest elements of both the independent and dependent claims. Moreover, applicants submit that it would not have been obvious to combine the teachings of the cited references at the time the invention was made.

1. Claim 29

The Office Action rejected Claims 29 under 35 U.S.C. § 103(a) as being obvious over Crater in view of Hesselink. The Office Action asserts that Crater and Hesselink disclose each of the elements of applicants' claims and that it would have been obvious to a person of ordinary

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skill in the art to combine the teachings of the cited references at the time the invention was made. Applicants respectfully disagree.

As amended, Claim 29 recites the following:

29. In a computer system including a client device in communication with a central server via a communication network, a method for dynamically generating a graphical user interface for controlling at least one pre-selected remote device comprising:

obtaining a request to control at least one pre-selected remote device from the client device by a central server and selecting one or more program modules corresponding to said request to control at least one pre-selected remote device from a plurality of program modules in response to said request, said one or more program modules operable to control said remote device; and

transmitting a screen interface with said one or more program modules, wherein said screen interface containing said one or more program modules is operable to generate a graphical user interface for controlling at least one pre-selected remote device when loaded within a browser application on the client device.

As discussed above in relation to Claims 1, 25, and 37, Crater does not teach generating a graphical user interface for controlling a remote device. Accordingly, Crater could not teach the elements as recited in Claim 29. In this regard, data displayed to a user in the Crater system is presented on web pages that each correspond to a different controller. Crater at Col. 10, lines 25-26. Since each web page is based on information received from a controller, the Crater system does not obtain "a request to control at least one pre-selected remote device." Instead, in the Crater system, users are required to navigate to web pages that display data obtained from a particular controller. In contrast, aspects of the present invention obtain input from a user that includes a request to control at least one pre-selected remote device in which data will be obtained. Then, based on this input, a graphical user interface that is appropriate for the remote device is generated.

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To establish a prima facie case of obviousness of a claim, the prior art references must teach or suggest each and every element as set forth in the claim. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Applicants respectfully submit that Crater and Hesselink, alone or in combination, fail to teach or suggest each and every element as set forth in Claim 29. As explained above, Crater and Hesselink, either alone or in combination, fail to teach or suggest at least "obtaining a request to control at least one pre-selected remote device" and generating "a graphical user interface for controlling at least one pre-selected remote device" as recited in the Claim 29. Accordingly, applicants respectfully request withdrawal of the pending rejection under 35 U.S.C. § 103 with regard to Claim 29.

2. Claims 30-31 and 35-36

Claims 30-31 depend on independent Claim 29. Similarly, Claims 35-36 are computer-readable media claims with elements that parallel Claim 29. As discussed above, Crater fails to teach or suggest generating a graphical user interface operable to control a remote device as recited in Claim 29. Accordingly for the above-mentioned reasons, Claims 30-31 and 35-36 are also allowable over Crater in view of Hesselink. Additionally, the dependent claims add to the nonobviousness of applicants' invention, some of the reasons which are discussed in further detail below.

Claim 30 includes the element of "wherein said request to control includes two or more preselected devices, and wherein said screen interface is an integrated screen interface containing said program modules, said program modules operable to generate a graphical user interface corresponding to said requested remote device when said single screen interface is loaded on a browser application." As described above, Crater is directed at a video interface architecture for industrial control systems in which data is collected from various controllers. In this regard, Crater states: "every controller in the system is constantly active and in communication with

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network 55, facilitating access by computer to any controller-based web pages . . . ." Crater at Col. 10, lines 34-38. By contrast, Claim 29 includes the element of generating a graphical user interface corresponding to said requested remote device. Since the Crater system does not generate a graphical user interface based on input received from the user that identifies a remote device, Crater in no way teaches the additional elements recited in Claim 30.

3. Claims 17-18, 20-22, 28, and 32-34

The Office Action rejected applicants' Claim 17 under 35 U.S.C. § 103(a) as obvious over Crater in view of Amini. Claims 18 and 20 were rejected under 35 U.S.C. § 103(a) as being obvious over Crater in view of Amini and further in view of Brush. Claims 21 and 28 were rejected under 35 U.S.C. § 103(a) as being obvious over Crater in view of Lemons. Claim 22 was rejected under 35 U.S.C. § 103(a) as being obvious over Crater in view of Nail. Claims 32 and 34 were rejected under 35 U.S.C. § 103(a) as being obvious over Crater in view of Hesselink and further in view of Lemons. Claim 33 was rejected under 35 U.S.C. § 103(a) as being obvious over Crater in view Hesselink and further in view of Launey. Because a dependent claim carries each and every limitation of the claim it depends on, the references, either alone or in combination, fail to teach or suggest each of the limitations as discussed above. Applicants further submit that the additional cited references fail to address the deficiencies associated with Crater. Accordingly, for this reason, applicants respectfully submit that the rejection of Claims 17-18, 20-22, 28, and 32-34 is in error and request that it be withdrawn.

CONCLUSION

Based on the above-referenced arguments, applicants respectfully submit that all pending claims of the present application are patentable, nonobvious, and allowable over the cited and applied references, either alone or in combination. Because the cited and applied references, either alone or in combination, fail to teach or suggest each element of the pending claims,

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applicants respectfully request withdrawal of the rejections of the claims and allowance of the present application.

If any questions remain, applicants request that the Examiner contact the undersigned at the telephone number listed below.

Respectfully submitted,

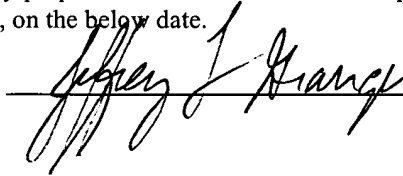
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